

CLAIMS

1. An image signal decoder for decoding an input image signal coded by a hybrid coding method using both intra-frame coding and interframe coding, comprising:

a variable length decoding section for performing variable length decoding on said input image signal, and generating motion vector information, coefficient information, time information and header information;

an interframe motion determination section for storing said motion vector information output from said variable length decoding section, and determining a magnitude of an interframe motion based on a distribution of said motion vector information, when determining that said interframe motion is larger than a predetermined level, said interframe motion determination section controlling an operation of said variable length decoding section so as to suspend said decoding by said variable length decoding section;

an inverse quantization section for performing inverse quantization on said coefficient information output from said variable length decoding section;

an inverse discrete cosine transform (hereinafter, referred to as inverse DCT) section for performing inverse DCT on said inversely quantized coefficient information output from said inverse quantization section;

a motion compensation section for performing motion compensation based on said inversely discrete-cosine-

transformed coefficient information output from said inverse DCT section and said motion vector information, and generating an output image signal; and

a frame buffer for temporarily storing said output image signal output from said motion compensation section.

2. An image signal decoder in accordance with claim 1, wherein

said interframe motion determination section comprises:

a motion vector information memory section for temporarily storing said motion vector information output from said variable length decoding section;

a threshold value determination section for measuring a distribution condition of motion vector data whose value is higher than a predetermined threshold value, and determining whether an interframe motion is present or absent, said motion vector data being included in said motion vector information stored in said motion vector information memory section; and

a control signal generation section for generating a control signal to control said variable length decoding section in accordance with a result of said determination by said threshold value determination section.

3. An image signal decoder for decoding an input image signal coded by a hybrid coding method using both intra-frame coding and interframe coding, comprising:

a variable length decoding section for performing

variable length decoding on said input image signal, and generating motion vector information, coefficient information, time information and header information;

a decode control section for determining a magnitude of an interframe motion based on said motion vector information and said coefficient information output from said variable length decoding section and the number of bits per frame, when determining that said interframe motion is larger than a predetermined level, said decode control section controlling an operation of said variable length decoding section so as to suspend said decoding by said variable length decoding section;

an inverse quantization section for performing inverse quantization on said coefficient information output from said variable length decoding section;

an inverse DCT section for performing inverse DCT on said inversely quantized coefficient information output from said inverse quantization section;

a motion compensation section for performing motion compensation based on said inversely discrete-cosine-transformed coefficient information output from said inverse DCT section and said motion vector information, and generating an output image signal; and

a frame buffer for temporarily storing said output image signal output from said motion compensation section.

4. An image signal decoder in accordance with claim 3, wherein

said decode control section comprises:

        a motion vector information memory section for temporarily storing said motion vector information output from said variable length decoding section;

        a coefficient information memory section for temporarily storing said coefficient information output from said variable length decoding section;

        a header information memory section for temporarily storing said header information output from said variable length decoding section;

        a motion determination section for determining whether an interframe motion is present or absent from a frequency of occurrence of coefficient information after said motion compensation is performed, based on said motion vector information stored in said motion vector information memory section, said coefficient information included in said coefficient information memory section and said header information stored in said header information memory section; and

        a control signal generation section for generating a control signal to control said variable length decoding section in accordance with a result of said determination by said motion determination section.